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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,542

09/19/2006

Tomoo Ikeda

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4483

22852

7590

02/04/2009

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
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EXAMINER

GOODLEY, JAMES E

ART UNIT

PAPER NUMBER

2817

MAIL DATE

DELIVERY MODE

02/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,542	<b>Applicant(s)</b> IKEDA ET AL.	
	<b>Examiner</b> JAMES E. GOODLEY	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,10,11,14,17-21,24-26,29,30,33 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,10,11,14,17,18,24-26,29,30,33 and 36-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/19/2006 12/14/2006</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, 10, 11, 14, 17, 18, 24-26, 29, 30, 33 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Furuyama et al. (JPO 05114500 – of record)*** in view of ***Sakata et al. (US 6,897,737)***.

Regarding **claims 1, 7, 10, 11, 14, 17, 18, 24-26, 29, 30, 33 and 36-38**, Figs. 1 and 2 and the abstract of Furuyama disclose a method for manufacturing an integrated circuit in a package by mounting the electronic device [13] having a first reference portion [two vertical straight lines and one horizontal straight line] into a rectangular recess [12] having a second reference portion [two vertical straight lines and one horizontal straight line] of a mounting base [11] of the package.

The mounting base is formed at a 90 degree inclined angle from a center line [on the horizontal bottom surface] of the mounting base.

Fig. 2 and the abstract of Furuyama disclose that the mounting occurs by self alignment due to surface tension.

A longitudinal direction of a vibrating prong of the tuning fork is parallel to the spinning axis of the crystal vibrator/oscillator.

Furuyama does not specifically disclose mounting a piezoelectric crystal vibrator in the package. Furuyama suggests, but does not appear to specifically disclose using a bonding material to accomplish the mounting and then hardening the bonding material.

However, Fig. 13 and lines 7-12 of column 8 in Sakata disclose mounting the base [110] of a tuning-fork crystal vibrator [100] on an electrode [314] on a surface of a package [310] utilizing a conductive bonding agent.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the general technique of mounting a piezo oscillator device like that disclosed in Sakata into the recess via a conductive bonding agent, for the purpose of properly aligning the crystal oscillator, for high frequency stability use in many practical communications circuit.

Fig. 6 and lines 43-53 of column 6 disclose wherein the crystal vibrator is formed by Au/Cr etching.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. GOODLEY whose telephone number is (571)272-8598. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James E Goodley/

Examiner, Art Unit 2817

/Robert Pascal/

Supervisory Patent Examiner, Art Unit 2817